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## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

YOR920030213US1

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Application Number

10/643,549

Filed

8/19/03

First Named Inventor

Knebel et al.

Art Unit

2138

Examiner

Dipakkumar Gandhi

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

applicant/inventor

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed  
(Form PTO/SB/98)

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Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

February 26, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.

\*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P O Box 1450, Alexandria, VA 22313-1450

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**5 Patent Application**

Applicant(s): Knebel et al.

Docket No.: YOR920030213US1

Serial No.: 10/643,549

10 Filing Date: August 19, 2003

Group: 2138

Examiner: Dipakkumar B. Gandhi

15 Title: Frequency Modification Techniques that Adjust an Operating Frequency to Compensate for Aging Electronic Components

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20 **MEMORANDUM IN SUPPORT OF  
PRE-APPEAL BRIEF REQUEST FOR REVIEW**

The present invention and prior art have been summarized in Applicants' prior responses.

**STATEMENT OF GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

25 Claims 1 through 28 are presently pending in the above-identified patent application. Claims 1-8, 20, 23, and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy (United States Patent Number 5,758,133) in view of Maguire, Jr. et al. (United States Patent Number 5,331,579), claims 9 and 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and further in view of Wu et al. ("Bipolar Bootstrapped Multi-emitter BiCMOS (B<sup>2</sup>M-BiCMOS) Logic for Low-Voltage Applications, Electronics, Circuits, and Systems," 1996, Volume 2, Pages 1174-1177), claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and further in view of Chur (United States Patent Number 5,124,849), claim 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy, 30 Maguire, Jr. et al., and Chur, and further in view of Ohie et al. (United States Patent Number 5,936,448), claim 12 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy, Maguire, Jr. et al., Chur, and Ohie et al., and further in view of Burns et al.

(United States Patent Number 4,698,587), claims 13 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and further in view of Hacker (United States Patent Number 4,845,419), claims 14 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and further in view of Bassett et al. (United States Patent Number 5,127,008), claims 16-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and Bassett et al., and further in view of Hacker, claim 19 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and further in view of Kolanek (United States Patent Publication Number 2002/0047745 A1), claim 22 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and Hacker, and further in view of Kolanek, claim 26 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and further in view of Chui and Ohie et al., claim 27 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and further in view of Iida et al. (United States Patent Number 6,525,585), and claim 28 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and Takahashi (United States Patent Number 6,253,358).

## ARGUMENTS

### Independent Claims 1, 20 and 28

Independent claims 1 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and claim 28 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evoy and Maguire, Jr. et al., and Takahashi. Regarding claim 1, the Examiner acknowledges that Kirkpatrick (assumed to be Evoy) does not explicitly teach the specific use of determining, at a particular age of the electronic system, one or more performance parameters for the electronic system, but asserts that Maguire, Jr. et al., in an analogous art, teach “that the present invention is a computer-based modeling system designed to improve the overall performance of components and systems that degrade with age.” (Col. 1, lines 10-12.)

As the Examiner acknowledges, Evoy does not explicitly teach the specific use of determining, at a particular age of the electronic system, one or more performance

parameters for the electronic system. Thus, contrary to the Examiner's assertion, Evoy does not disclose or suggest *adjusting an operating frequency of the one or more electronic components* from the electronic system *in accordance with the one or more performance parameters, wherein the one or more performance parameters are correlated with maximum operating frequency of one or more electronic components of the electronic system for the particular age of the electronic system.*

In addition, Maguire et al. teach that

the present invention is a computer-based modeling system designed to improve the overall performance of components and systems that degrade with age. The invention combines expert rules, probabilistic models, and deterministic models to *evaluate and predict the effect of component aging on component life extension, operational readiness, maintenance effectiveness, and safety of a system along with evaluating and recommending maintenance and operational actions to improve the overall performance of the modeled system.*

(Col. 1, lines 10-19; emphasis added.)

Maguire et al. further teach that "the information is processed by the system to obtain *output values of the life left, the failure probabilities, the useful service, and the life profiles of the systems and components*" (Col. 5, lines 34-37; emphasis added) Thus, Maguire also does *not* disclose or suggest *adjusting an operating frequency of the one or more electronic components* from the electronic system *in accordance with the one or more performance parameters, wherein the one or more performance parameters are correlated with maximum operating frequency of one or more electronic components of the electronic system for the particular age of the electronic system.* Independent claims 1, 20, and 28 require determining, at a particular age of the electronic system, one or more performance parameters for the electronic system, the one or more performance parameters correlated with maximum operating frequency of one or more electronic components of the electronic system for the particular age of the electronic system; and adjusting an operating frequency of the one or more electronic components from the electronic system in accordance with the one or more performance parameters.

Thus, Evoy and Maguire, Jr. et al., alone or in combination, do not disclose or suggest determining, at a particular age of the electronic system, one or more performance parameters for the electronic system, the one or more performance parameters

correlated with maximum operating frequency of one or more electronic components of the electronic system for the particular age of the electronic system; and adjusting an operating frequency of the one or more electronic components from the electronic system in accordance with the one or more performance parameters, as required by independent claims 1, 20, and 28.

Additional Cited References

Wu et al., Chur, Ohie et al., Burns et al., Hacker, Bassett et al., Kolanek, Iida et al., and Takahashi were cited by the Examiner in rejecting the dependent claims. Applicants note that neither Wu et al., Chur, Ohie et al., Burns et al., Hacker, Bassett et al., 10 Kolanek, Iida et al., nor Takahashi address the issue of determining, at a particular age of an electronic system, one or more performance parameters for the electronic system, wherein the one or more performance parameters are correlated with a maximum operating frequency of electronic components of the electronic system for the particular age of the electronic system; and adjusting an operating frequency of the electronic components in 15 accordance with the one or more performance parameters.

Thus, Wu et al., Chur, Ohie et al., Burns et al., Hacker, Bassett et al., Kolanek, Iida et al., and Takahashi, alone or in combination, do not disclose or suggest determining, at a particular age of the electronic system, one or more performance parameters for the electronic system, the one or more performance parameters correlated 20 with maximum operating frequency of one or more electronic components of the electronic system for the particular age of the electronic system; and adjusting an operating frequency of the one or more electronic components from the electronic system in accordance with the one or more performance parameters, as required by independent claims 1, 20, and 28.

Dependent Claims 2-19 and 21-27

Claims 2-19 and 21-27 are dependent on claims 1 and 20, respectively, and are therefore patentably distinguished over Evoy, Maguire, Jr. et al., Wu et al., Chur, Ohie et al., Burns et al., Bassett et al., Kolanek, Iida et al., and Takahashi (alone or in any combination) because of their dependency from independent claims 1 and 20 for the reasons set forth above, as well as other elements these claims add in combination to their 30 base claim.

All of the pending claims, i.e., claims 1-28, are in condition for allowance and such favorable action is earnestly solicited

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact  
5 the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



10 Date: February 26, 2007

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